Ashworth

## BRANCH LISTINGS

### Bellshill
Marion Street, Off Main Street, Mossend, Bellshill ML4 1EB
Tel: 01698 742839 Fax: 01698 745820

### Bristol
Unit 9, Oak Lane, Fishponds Trading Estate, Bristol BS5 7UY
Tel: 0117 961 7000 Fax: 0117 961 7001

### Leeds
Jawbone Industrial Estate, Wood Lane, Rothwell, Leeds LS26 0RS
Tel: 0113 282 0002 Fax: 0113 282 5572

### Radcliffe
Higher Ainsworth Road, Radcliffe, Manchester M26 4AF
Tel: 0161 723 3468 Fax: 0161 724 6800

### Rochester
Neptune Way, Medway City Estate, Rochester, Kent ME2 4NA
Tel: 01634 290731 Fax: 01634 290778

### Wednesfield
Neachells Lane, Wednesfield, Wolverhampton WV11 3QF
Tel: 01902 867400 Fax: 01902 867499

### White City
3/5 Silver Road, Off Ariel Way, White City, London W12 7SG
Tel: 020 8600 3210 Fax: 020 8600 3232

**FOR YOUR NEAREST ASHWORTH BRANCH CALL:**
**FREEPHONE 0800 783 7680**
**EMAIL: a1plastics@ashworth.eu.com**
**OR VISIT www.ashworth.eu.com**


For your nearest branch Call freephone **0800 783 7680**,
visit **www.ashworth.eu.com** or **email a1plastics@ashworth.eu.com**

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SUPPLYING MECHANICAL SERVICES
AND PROCESS CONTRACTORS

# GF
# PIPING SYSTEMS PRODUCT GUIDE

Ashworth

SUPPLYING MECHANICAL SERVICES
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# PVC-U

**PVC-U is a popular material with an excellent price to performance ratio. It is ideal for a wide range of diverse applications. The product range available has been developed over many years and represents the biggest range of all GF products.**

- Excellent price : performance ratio
- Good chemical resistance
- Easy and fast to joint
- Low installation cost
- Minimal training & equipment needed for jointing
- Widest range of fittings

## PVC-U TECHNICAL DATA

| | |
|---|---|
| **Colour:** | Dark Grey |
| **Texture:** | Shiny Smooth |
| **Nail Test:** | No |
| **Floats on Water:** | No |
| **Flammability:** | In flame carbonises, extinguishes away from flame |
| **Jointing:** | Solvent Cement: Tangit/Dytex |
| **Operating Temperature:** | 0°C to +60°C |
| **Dimension:** | 6mm-400mm/3/8"-8" |
| **Maximum Pressure rating (PN) based on 20°C Water:** | Inch – PN15 (Class E 3/8"-6")<br>Inch – PN12 (Class D 1/4"-4")<br>Inch – PN9 (Class C 2"-8")<br>Inch – PN12 (Class 7T 3/8"-2")<br>Metric – PN16 (6-160mm)<br>Metric – PN10 (25-315mm)<br>Metric – PN6 (50-400mm) |

## APPLICATIONS

The ease and low cost of solvent cement jointing make PVC-U a popular choice and not surprisingly it is the most commonly used material in industrial systems worldwide.

- Water Industry
- Waste water
- Effluent treatment
- Swimming pools
- Chemical industry
- Shipbuilding
- Micro-electronics







# PVC-C

**PVC-C, due to its high chlorine content has excellent high temperature resistance (up to 80°C). It offers a wide ranging chemical resistance against many aggressive media at high temperature and high concentrations.**

- Excellent temperature resistance (up to 80°C)
- Long life span
- Minimal training and equipment needed for jointing
- Simple jointing
- Quick and easy installation
- Low thermal conductivity
- Low expansion coefficient
- Excellent chemical resistance

## PVC-C TECHNICAL DATA

| | |
|---|---|
| **Colour:** | Light Grey |
| **Texture:** | Shiny Smooth |
| **Nail Test:** | No |
| **Floats on Water:** | No |
| **Flammability:** | In flame carbonises, extinguishes away from flame |
| **Jointing:** | Solvent Cement: Tangit/Dytex |
| **Operating Temperature:** | 0°C to +80°C |
| **Dimension:** | 16mm-225mm |
| **Maximum Pressure rating (PN) based on 20°C Water:** | PN16 (16-160mm)<br>Metric – PN10 (75-225mm) |

## APPLICATIONS

PVC-C is in many ways similar to PVC-U but offers better mechnical strength characteristics especially at high temperatures, together with better chemical resistance.

- High temperature environments
- High corrosive environments
- Chemical industry
- Hot water services

# ABS

**ABS has a high impact resistance and an excellent resistance to extreme environmental conditions. It is particularly suitable for use at low temperatures down to -40°C and due to its good insulating properties, requires little or no insulation.**

- Excellent for low temperature use
- Lightweight
- Low installation cost
- High impact resistance
- Requires little or no insulation

## ABS TECHNICAL DATA

| | |
|---|---|
| **Colour:** | Mid Grey |
| **Texture:** | Shiny Smooth |
| **Nail Test:** | No |
| **Floats on Water:** | No |
| **Flammability:** | Bright flame and drips,continues to burn away from flame |
| **Jointing:** | Solvent Cement: Tangit |
| **Operating Temperature:** | -40°C to +60°C<br>d250-d315 operating temp +40°C |
| **Dimension:** | 16mm-315mm/3/8"-8" |
| **Maximum Pressure rating (PN) based on 20°C Water:** | Inch – PN15 (Class E 3/8"-4")<br>Inch – PN12 (Class D 6")<br>Inch – PN9 (Class C 1"-8")<br>Inch – PN12 (Class 7T 1/2"-2")<br>Metric – PN10 (d32mm-d225mm)<br>Metric – PN6 (d250mm-d315mm) |

## APPLICATIONS

ABS is an ideal material for tough, cold environments like Commercial and Industrial Refrigeration Systems.

- Commercial Refrigeration
- Industrial Refrigeration
- Shipping and Marine (Lloyds Register approval)
- Water Treatment
- Process Cooling
- Air Conditioning







# COOL-FIT

**COOL-FIT ABS is a complete pre-insulated plastic piping system offering optimum insulation and fast jointing pressure bearing plastic pipe – 2 products in 1.**

- PN10 ABS carrier pipe
- Wrapped in high density PUR
- HDPE Jacket pipe
- PUR Insulation
- 2 products in 1
- Save material costs
- Reduce installation time
- Simplify logistics

## APPLICATIONS

COOL-FIT ABS can be prefabricated at the GF prefabrication facility. This could save you valuable time and money, allowing pipework to be jointed and assembled in advance by GF experts and delivered to site just when you need it. This service is also available for other GF piping systems – call for details.

Ideal for use in:

- Dairies
- Abbattoirs
- Meat Processing
- Cold Storage Facilities

# INSTAFLEX

**Instaflex represents the future of commercial and domestic installations.**

**Flexible polybutylene pipe means fast, economic installations even in awkward shaped and curved buildings. Risers and long runs can be pre-fabricated from drawings offsite prior to work starting and then installed to programme, improving site productivity and reducing labour time.**

- Flexible
- Simple, low cost installation
- Easy to install
- Comprehensive range of fittings
- Socket, compression & electrofusion jointing methods
- Simple to pre-fabricate
- Low system noise

## POLYBUTYLENE INSTAFLEX TECHNICAL DATA

| | |
|---|---|
| **Colour:** | Grey |
| **Texture:** | Smooth |
| **Nail Test:** | Slight |
| **Floats on Water:** | Yes |
| **Flammability:** | Continues to burn away from flame |
| **Jointing:** | Heat Fusion: Butt, Socket & Electrofusion, Compression Push-fit |
| **Operating Temperature:** | 0°C to +95°C |
| **Dimension:** | 16mm-110mm |
| **Maximum Pressure rating (PN) based on 20°C Water:** | PN16 |

## APPLICATIONS

The flexibility of the material is a huge bonus and means that curved buildings such as the Royal Albert Hall presented few installation headaches.

- Heating systems and hot/cold water services
- Compressed air systems
- High temperature drainage
- Chilled water

Ideal for applications in:

- Hospitals
- Hotels
- Schools
- Accommodation blocks
- Office blocks







# PRE-FABRICATED INSTAFLEX

**GF can translate your drawings into convenient size assemblies for transportation using their in-house CAD facility. Drawings can be sent and received by email or in paper form.**

**All jointing is carried out in a purpose built assembly area and all joints are individually marked for full traceability.**

**The only limit on the size of assembly is transport. GF can deliver straight assemblies up to 12 metres long or coiled assemblies of any length. All deliveries can be 'just in time' thus removing the likelyhood of site damage.**

**Long pipe runs can be installed quickly and easily offering large savings on site labour costs and ensuring site deadlines are met.**

## INSTAFLEX (PB) CAN BE PRE-FABRICATED AT GF FABRICATION FACILITY.

The GF fabrication department is manned by fully qualified and trained personnel who are able to produce pre-fabricated pipework, including INSTAFLEX PB to your exact specifications from your own drawings.

This could save you valuable time and money, allowing pipework to be jointed and assembled in advance by GF experts and delivered to site just when you need it.

This service is also available for other GF piping systems – call for details.

# PP (METRIC)

**Polypropylene offers a wide range of advantages making it ideal for a number of applications.**

**You also have the added advantage of one source for products, jointing technology and service.**

- High impact strength
- Lightweight
- Wide temperature range
- Excellent chemical resistance

## PP (METRIC) TECHNICAL DATA

| | |
|---|---|
| **Colour:** | Light Beige |
| **Texture:** | Waxy |
| **Nail Test:** | Slight |
| **Floats on Water:** | Yes |
| **Flammability:** | Bright flame and drips,continues to burn away from flame |
| **Jointing:** | Heat fusion: Butt fusion, Socket fusion & IR |
| **Operating Temperature:** | -10°C to +90°C |
| **Dimension:** | 16mm-500mm |
| **Maximum Pressure rating (PN) based on 20°C Water:** | PN10 (16mm-500mm) PN16 (20mm-25mm) PN6 (50mm-500mm) |

## APPLICATIONS

PP Pipes, Fittings and Valves have high heat resistance but they have no particular protection against the effects of UV radiation during operation and should therefore be adequately protected by means of UV absorbent coating for example.

Its outstanding chemical resistance, high thermal resistance and good fatigue strength makes it ideal for the safe conveyance of aggressive Chemicals and other hot and corrosive fluids in the Chemical Industry.







# PRE-FABRICATED PP

**Polypropylene (PP) can be pre-fabricated at the GF pre-fabrication facility.**

**The GF pre-fabrication department is manned by fully qualified and trained personnel who are able to produce pre-fabricated pipework, to your exact specifications from your own drawings.**

**This could save you valuable time and money, allowing pipework to be jointed and assembled in advance by GF experts and delivered to site just when you need it. This service is also available for other GF piping systems – call for details.**

## ß-PP-H. BECAUSE YOUR AGGRESSIVE MEDIA DEMAND MAXIMUM PERFORMANCE ß-PP-H VERSATILITY IS WELL PROVEN.

ß-PP-H is a solid, all-round material for problem-free handling of aggressive media. It's an exceptionally popular material for distribution of the widest range of chemicals.

Because of its ß-nucleation, this material possesses outstanding impact strength, even at near-freezing temperatures. And since it's in MRS class 10, it offers a high safety allowance for applications from 0°C to 40°C.

POLYETHYLENE

# PE

**The most widespread use of PE is for buried gas and water pipelines, where its benefits of low weight, ductile characteristics and toughness can be translated to industrial and building services applications. Jointing is carried out by a heat fusion method of jointing, such as socket fusion, butt fusion or electrofusion.**

- Lightweight
- Robust
- Good chemical resistance
- Good low temperature resistance

## PE TECHNICAL DATA

| | |
|---|---|
| **Colour:** | Black |
| **Texture:** | Waxy |
| **Nail Test:** | Yes |
| **Floats on Water:** | Yes |
| **Flammability:** | Bright flame and drips,continues to burn away from flame |
| **Jointing:** | Heat fusion: Butt, Socket & Electrofusion, Compression |
| **Operating Temperature:** | -50°C to +60°C |
| **Dimension:** | 16mm-630mm |
| **Maximum Pressure rating (PN) based on 20°C Water:** | PN10 PN16 |

## APPLICATIONS

Thanks to its toughness PE is often found in rugged industries where strength is paramount.

- Gas & water distribution
- Compressed air
- Chemical process industry
- Chilled water systems as per ABS
- Waste & effluent treatment

**We offer a full range of PE fittings. Call for more details.**





POLYVINYLIDENE

# PVDF

**PVDF in its high purity form.**

**PVDF-HP is free from additives, stablising agents, pigments or other fillers.**

- Physiologically inert
- FDA approved
- Corrosion free
- Excellent chemical resistance
- Can be BCF jointed
- Manufactured under strict clean room conditions
- Can be steam sterilised
- Economical installation and low maintenance costs

## PVDF TECHNICAL DATA

| | |
|---|---|
| **Colour:** | White/Opaque |
| **Texture:** | Shiny Smooth |
| **Nail Test:** | No |
| **Floats on Water:** | No |
| **Flammability:** | In flame carbonises, extinguishes away from flame |
| **Jointing:** | Heat fusion: Butt fusion, BCF & IR |
| **Operating Temperature:** | -20°C to +140°C |
| **Dimension:** | 16mm-315mm |
| **Maximum Pressure rating (PN) based on 20°C Water:** | PN16 (20mm-25mm) PN10 (90mm-315mm) |

## APPLICATIONS

Because of the strict 'clean room' production environment PVDF-HP is particularly suitable for ultrapure media systems in the following industries.

- Semi-conductor (ultra pure water)
- Pharmaceutical (pure water)
- Biotechnology
- Medical

# AUTOMATION

**GF offer a range of electrically and pneumatically operated actuated valves in PVC-U, PVC-C, ABS, PP-H, PP natural, PVDF and PVDF-HP.**

**Metal butterfly valves are also available in both manual and actuated versions.**




- Ball valves
- Diaphragm valves
- Butterfly valves
- Solenoid valves

## QUICK REFERENCE

**Electric**

- Operation status monitoring
- Expandable to PID controller
- Emergency manual override as a standard feature
- Communication interfaces
- ISO-Namur interfaces
- Automatic adjustment of voltage and frequency

**Pneumatic**

- Pre-loaded spring sets
- Long service life with guaranteed 250,000 cycles
- Optional emergency manual override
- ISO-Namur interfaces
- Stroke limiter available as special version

## THE TYPE 546 BALL VALVE SETS NEW STANDARDS FOR AUTOMATION.

Available with both electric and pneumatic actuators, the modular nature of the Type 546 means that automation additions can be made quickly and simply.

There are two electric actuators for the 546 – the EA11 and the EA21 featuring a new more compact design incorporating an intergrated manual override with the handle built in to the housing.

There are also two new pneumatic actuators – the PA11 and the PA21 featuring a new all plastic housing with pre-loaded spring sets for safer and easier maintenance.

## NEW FIELD BUS TECHNOLOGY

GF are now able to offer a range of actuated valves complete with Field Bus Systems.

AS-Interface is the simplest networking solution for actuators, and is the system that GF is focused on. For higher level networks, AS-Interface can be linked into other Field Bus networks, alternatively, GF is able to offer actuators complete with alternative Field Bus systems.

AS-Interface offers many benefits, mainly related to reduced engineering, simpler wiring and improved operations.



# ANALYTICAL/ FLOW MONITORING

**GF offer SIGNET Flow monitoring and analytical equipment including the award winning Vortex flowmeters featuring high accuracy and repeatability surpassing any plastic vortex sensor performance currently available.**

**There is also a true high purity version, made with virgin PVDF plastic polymer in a true Class 10,000 environment then tested and bagged in Class 1000 to maintain absolute system integrity.**


SIGNET has the answer for flow monitoring and instrumentation:

- Paddlewheel flow meters
- pH & ORP sensors
- Temperature sensors
- Pressure sensors
- Range of monitors and transmitters

# SECONDARY CONTAINMENT

**Dual or Secondary Containment Systems offer added protection to the environment from potentially harmful substances.**

## ADVANTAGES

- Simplified assembly
- Can be retro-fitted
- Pressure testing of outer & inner pipe
- Versatile end fitting
- Compact construction
- Transparent outer pipe for visual checks (on Contain-It Two)
- Environmental protection
- Excellent chemical resistance

## SIZE RANGE

50mm-315mm (outer)
20mm-225mm (inner)

## APPLICATIONS

GF secondary containment piping systems are used by a wide variety of industries conscious of their responsibilities to the surrounding environment;

- Surface technology and electroplating
- Semiconductor manufacture
- Food processing
- Fuels, oils and grease
- Environmental technology
- Exhaust gas purification
- Water treatment





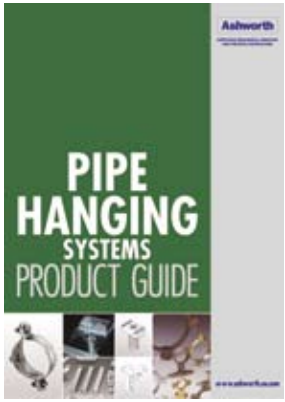


# ACCESSORIES & MACHINES

## ASHWORTH STOCK AND SUPPLY A FULL RANGE OF PIPE JOINTING ACCESSORIES INCLUDING:

• Flanges • Pipe Clips • Gaskets & Seals • Pipe Cutters
• Pipe Chamfering Tools • Brushes for Solvent Cement Application
• Cleaning Paper Roll • Cleaning Fluid • Solvent Cement

## IF YOU CANNOT FIND WHAT YOU ARE LOOKING FOR PLEASE CALL OUR EXPERIENCED SALES TEAM.




Available on request

## ASHWORTH SUPPLY A FULL RANGE OF PIPE JOINTING MACHINES INCLUDING:

• Fusion Jointing Machines for INSTAFLEX (PB), PP, PPr & PVDF
• SG110 Bench mounted machine for socket fusion. Pipe sizes 20 – 110mm
• MSE 63 Hand held socket fusion machine. Pipe sizes 16 – 63mm
• MSE110 Hand held socket fusion machine. Pipe sizes 16 – 110mm

## FOR FURTHER DETAILS CONTACT YOUR LOCAL ASHWORTH BRANCH.

| | | TYPICAL APPLICATIONS | | SIZE RANGE | PRESSURE RATING | TEMPERATURE RATING | KEY PRODUCT FEATURES | |
|---|---|---|---|---|---|---|---|---|
| **PVC-U** |  | • Water industry<br>• Waste water<br>• Effluent treatment<br>• Swimming pools<br>• Chemical industry | | 6–400mm<br>3/8–8″ | PN16@20°C<br>PN15@20°C | 0°C to +60°C | • Good chemical resistance<br>• Low installation cost<br>• Widest range of fittings | |
| **PVC-C** |  | • High temperature environments<br>• Highly corrosive environments<br>• Chemical industry<br>• Hot water services | | 16–225mm | PN16@20°C | 0°C to +80°C | • Excellent chemical resistance<br>• Excellent temperature resistance<br>• Simple jointing<br>• Long life span | |
| **ABS** |  | • Commercial refrigeration<br>• Industrial refrigeration<br>• Shipping and marine (Lloyds Register approval)<br>• Water treatment<br>• Process cooling | • Air conditioning | 16–315mm<br>3/8–8″ | PN10@20°C<br>PN15@20°C | -40°C to +60°C | • Lightweight<br>• Low installation cost<br>• High impact resistance<br>• Requires little or no insulation<br>• Excellent at low temperatures | |
| **COOL-FIT**<br>**PRE-INSULATED ABS** |  | • Dairies<br>• Slaughter houses<br>• Meat processing<br>• Cold storage facilities | | 16–225mm | PN10@20°C | -40°C to +60°C | • PUR insulation<br>• HDPE jacket pipe<br>• 2 products in 1<br>• Reduces installation time | |
| **INSTAFLEX (PB)** |  | • Heating systems and hot/cold water services<br>• Compressed air systems<br>• Hot water drainage<br>• Chilled water<br>• Hospitals and hotels | • Schools and accommodation blocks | 16–110mm | PN16@20°C | -15°C to +95°C | • Flexible<br>• Easy to install<br>• Simple to pre-fabricate<br>• Low system noise<br>• Comprehensive range of fittings | • Socket, compression & electrofusion methods of jointing |
| **PVDF** |  | • Semi-conductor<br>• Pharmaceutical<br>• Biotechnology<br>• Medical<br>• Chemical industry | | 16–225mm | PN16@20°C | -40°C to +140°C | • Excellent chemical resistance<br>• Bead and crevice-free jointing<br>• Corrosion free<br>• Can be steam sterilised | |
| **PP-H** |  | • Safe conveyance of aggressive chemicals, e.g. hot and corrosive fluids<br>• Chemical processing | | 16–500mm | PN10@20°C | 0°C to +95°C | • High impact strength<br>• Lightweight<br>• Wide temperature range<br>• Excellent chemical resistance | |
| **ACTUATION** |  | • Water industry<br>• Waste water<br>• Chemical industry<br>• Swimming pools<br>• Effluent treatment | • Pharmaceutical industry<br>• Semiconductor industry | Dependent on material and valve type | Dependent on material | Dependent on material | • All plastic construction<br>• Can be retro fitted<br>• Wide range of pneumatic and electric actuators | |
| **SIGNET** |  | • Water industry<br>• Waste water<br>• Chemical industry<br>• Swimming pools<br>• Effluent treatment | | Dependent on material and valve type | Dependent on material | Dependent on material | • Award-winning Vortex meters<br>• Paddlewheel sensors<br>• Temperature and pressure sensors<br>• Analytical sensors | |
| **DUAL CONTAINMENT**<br>**(PIPE-IN-PIPE)** |  | • Surface technology and electroplating<br>• Semiconductor manufacture<br>• Food processing<br>• Fuels, oils and grease<br>• Environmental technology | • Exhaust gas purification<br>• Water treatment | 50–315mm (outer)<br>20–225mm (inner) | Dependent on material | Dependent on material | • Excellent chemical resistance<br>• Compact construction<br>• Can be retro fitted<br>• Simplified assembly<br>• Pressure testing of outer and inner pipe | • Environmental protection |